Epitomes

Important Advances in Urology

Urology

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The Council on Scientific Affairs of the California Medical Association presents the following epitomes of progress in urology. Each item, in the judgment of a panel of knowledgeable physicians, has recently become reasonably firmly established, as to both scientific fact and important clinical significance. The items are presented in simple epitome, and an authoritative reference, both to the item itself and to the subject as a whole, is generally given for those who may be unfamiliar with a particular item. The purpose is to assist busy practitioners, students, researchers, and scholars to stay abreast of these items of progress in urology that have recently achieved a substantial degree of authoritative acceptance, whether in their own field of special interest or another.

The items of progress listed below were selected by the Advisory Panel to the Section on Urology of the California Medical Association, and the summaries were prepared under the direction of Dr Nachtsheim and the Panel.

Informing Patients About the PSA Test: A New Requirement

A NEW LAW in California requires a physician who examines a patient's prostate gland to inform that patient of the prostate specific antigen (PSA) test if the patient falls into one of four broad categories. The 1997 law was created by Senate Bill 1, carried by California's Senate President Pro Tempore and written on behalf of a popular lobbyist who was seriously ill with prostate cancer (full text of SB1 follows on page 167). Along with many other professional groups, California's medical association has clear policy opposing statutory requirements for physicians that prejudice the exercise of their clinical judgment. In the circumstances of SB 1, The Medical Association worked with the author so that the final version of the bill no longer carried criminal penalties for non-complying physicians and used Patient Section Criteria based on American Urological Association recommendations.

The enacted bill requires a physician to provide information on "the availability of appropriate diagnostic procedures, including but not limited to, the prostate specific antigen (PSA) test" if the physician for any reason examines the patient's prostate gland and *any* of the following applies: the physician believes it is medically necessary to provide the required information, *or* the patient is over 50 years of age, *or* manifests clinical symptomatology, *or* is at increased risk of prostate cancer.

Enactment of SB 1 should not create major changes in the practice of many California physicians who conduct a rectal exam for the purpose of detecting prostate cancer (as opposed to other possible reasons) and are already accustomed to discussing the potential risks and benefits of prostate specific antigen tests (PSA) and other diagnostic procedures for prostate cancer. This discussion usually includes reference to the current range of scientific statements on the appropriate use of PSA screening and facts most relevant for patient decision making. For example, the American Urological Association (AUA), which has revised its recommendations since SB1 became law, now endorses the American Cancer Society (ACS) recommendations. Their joint policy suggests offering a PSA test and digital rectal examination to men in approximately the same categories as outlined by SB 1, and also includes the statement that "Screening for prostate cancer in asymptomatic men can detect tumors at a more favorable stage (anatomic extent of the disease). There has been a reduction in mortality from prostate cancer, but it has not been established that this is a direct result of screening." The National Cancer Institute finds insufficient evidence to recommend serum tumor markers such as the prostate specific antigen test, while the American College of Physicians (ACP) recommends an individualized decision of whether to screen a patient with a digital rectal exam or prostate specific antigen test. The ACP also suggests statements that could be given to the patient in making this decision. These include information on false-positive and false-negative results, the current lack of proof of the benefits of screening and aggressive treatment of prostate cancer, and the relatively high probability that further invasive evaluation will be required as a result of testing.

Some physicians laud SB 1's intent to increase discussion between physicians and patients of prostate cancer detection, but note that the law's requirements are too broad. A digital rectal exam that includes palpation of the prostate may be conducted on any patient to detect occult bleeding, to determine prostate position, or for other reasons unrelated to suspicion of prostate cancer. Physicians who ignore the prostate specific antigen test and other patient information requirements of SB 1 can be prosecuted by the Medical Board for unprofessional conduct. In a larger context, SB 1 is an example of elected officials

Bill Number: SB 1 Chaptered
Chapter 11

Filed with Secretary of State May 20, 1997
Introduced by Senator Burton

December 2, 1996

An act to add Section 2248 to the Business and Professions Code, relating to health, and declaring the urgency thereof, to take effect immediately.

The People of the State of California do enact as follows:
Section 1. Section 2248 is added to the Business and Professions Code, to read:
2248. This section shall be known as, and may be cited as, the Grant H. Kenyon Prostate Cancer Detection Act.

(a) If a physician and surgeon, during a physical examination, examines a patient's prostate gland, the physician and surgeon shall provide information to the patient about the availability of appropriate diagnostic procedures, including, but not limited to, the prostate antigen (PSA) test, if any of the following conditions are present:

(1) The patient is over 50 years of age.

(2) The patient manifests clinical symptomatology.

(3) The patient is at an increased risk of prostate cancer.

(4) The provision of the information to the patient is medically necessary, in the opinion of the physician and surgeon.

(b) Violation of subdivision (a) constitutes unprofessional conduct and is not subject to Section 2314.

Section 2. This act is an urgency statute necessary for the immediate preservation of the public peace, health, or safety within the meaning of Article IV of the Constitution and shall go into immediate effect. The facts constituting the necessity are:
Prostate cancer is currently a leading cause of cancer death in males in this country. In order to save as many people's lives from this deadly disease as soon as possible through public awareness of the availability of early detection procedures, it is necessary that this act take effect immediately.

responding to important medical issues by incorporating elements of clinical practice guidelines in effect at that time into legal requirements. It is important for physicians to understand these legal requirements while they seek to apply an evolving body of knowledge to the individual patient in their care.

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The Urethral Sling and Stress Urinary Incontinence

STRESS URINARY INCONTINENCE affects between 15–60% of women, and has a tremendous impact on a woman's quality of life. Incontinence is either urgency or stress in nature. Urgency incontinence and mild SUI can be successfully managed in general with behavioral or anticholinergic treatment. Moderate to severe SUI is best managed by operative intervention. The following epitome discusses the role of urethral slings in the management of SUI.

Stress urinary incontinence is defined as the involuntary loss of urine related to increases in abdominal pressure resulting from activities such as laughing, coughing, lifting, and positional changes. Two factors are important to the development of stress urinary incontinence: urethral hypermobility and/or intrinsic sphincteric deficiency. Both factors commonly coexist and vary in their relative contribution in women with stress urinary incontinence. Hypermobility is the rotational descent of the proximal urethra and bladder neck into the vagina when there are increases in intra-abdominal pressure. Intrinsic sphincteric deficiency refers to a deficiency in urethral sphincter function, and is generally unrelated to urethral support. All operative procedures for stress urinary incontinence address either or both of these factors. The selection of a surgical procedure for stress urinary incontinence therefore depends on the relative contributions of urethral hypermobility and intrinsic sphincteric deficiency. Stress urinary incontinence related primarily to bladder neck hypermobility can commonly be corrected with routine bladder neck suspensions or urethral slings. If, however, urethral sphincteric deficiency is the primary cause of stress urinary incontinence, urethral bulking agents, artificial urinary sphincters, and sling procedures are appropriate. Of the treatment modalities mentioned, the urethral sling is the only procedure that addresses both the hypermobile urethra and intrinsic sphincteric deficiency. In addition, there has been a relatively recent realization that intrinsic sphincteric deficiency plays a more prominent role in stress urinary incontinence than previously believed. These two factors have led to an increase in the popularity of the urethral sling procedure.

In 1910, Goebell introduced the concept of a urethral sling by using reflected pyramidalis muscle as a bolster for the urethra. This is analogous to a leather seat supporting a child on a swing. Since then, several modifications using different autologous (e.g. rectus fascia, fascia lata, vaginal wall) as well as synthetic (e.g. mersilene, Gortex, Marlex) materials have been used. The utility of synthetic materials, however, is limited because of complications including bladder erosion, infection, and fistula formation. There has been a recent interest in the use of homologous tissue for urethral slings, and the initial results appear promising.

Approaches to the urethral sling can be classified as transabdominal, transvaginal, and a combination of both. There is no compelling evidence that one approach is